DOCUMENT RESUME

ED 195 306 JC 800 630

AUTHOR Loomis, Katherine A.; And Others
TITLE Remediating and Enriching Performance Learning. Implementing Competency Based Education in Community Colleges, 8.
INSTITUTION Virginia Polytechnic Inst. and State Univ., Blacksburg.
SPONS AGENCY Michigan State Dept. of Education, Lansing. Higher Education Management Services.
PUB DATE [80]
NOTE 15p.; For related documents, see JC 800 623-632.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Basic Skills; Community Colleges; Competency Based Education; *Diagnostic Teaching; *Educational Testing; *Enrichment; Individualized Instruction; *Informal Assessment; Problem Solving; *Remedial Instruction; Self Concept; *Student Evaluation; Student Interests; Teacher Role; Two Year Colleges; Vocational Education

ABSTRACT

Part of a series on implementing competency-based education, this monograph discusses some diagnostic and prescriptive techniques which can be used in the day-to-day management of performance learning to determine which students need remediation or enrichment. Using analogies from detective work, the monograph suggests ways of assessing students' interest, self-concept, basic skills, and problem-solving abilities to gain clues about who needs additional attention. Several potential problems, or "alleged crimes against the student, occupational program, or occupational teacher," are then discussed to illustrate the most and least effective uses of these informal student assessments. The monograph goes on to discuss the value of "expert testimony," that is, formal measurements, such as Canfield and Lafferty's Learning Style Inventory, the Cloze procedure, SMOG assessment of reading level, math and communication tests, and professional opinions. The monograph concludes with a list of ways instructors can provide both enrichment and remediation, including the use of instructional modules, optional learning experiences, peer tutors, and reward systems to encourage the development of basic and problem-solving skills. A three-item reading list is included. (AYC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED195306
C
B
E
JC 800 630

REMEDIATING AND ENRICHING PERFORMANCE LEARNING

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

James H. Folkening

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

KATHERINE A. LOOMIS
DANIEL E. VOGLER
GAIL TRAPNELL

2

This series of monographs includes the following:

1. Using Performance Goals
2. Using Performance Objectives
3. Developing a Performance Syllabus
4. Evaluating Performances
5. Motivating Performance Learning
6. Developing and Using Performance Modules
7. Addressing Affective Performance
8. Remediating and Enriching Performance Learning
9. Managing a Performance On The Job
10. Maximizing Teaching/Learning

This is one of ten monographs in a series relating to IMPLEMENTING COMPETENCY BASED EDUCATION IN COMMUNITY COLLEGES developed at Virginia Polytechnic Institute and State University. This project was developed under a grant to St. Clair County Community College and was funded by the Michigan Department of Education, Higher Education Management Services, Occupational Education Unit. Project #33B9-7447-2.

Remediating and Enriching Performance Learning

There are three functional phases to occupational education: the recruitment phase, the learning/teaching phase, and the placement phase. While each phase can be managed separately, all are related to one another. In simplest terms, if the right students are recruited, if the right educational experiences are offered, and if the activities associated with placement are addressed, then the program will be successful. However, if any one of these phases is slighted, then compensation will need to be made in one of the other phases. For example, if attrition is high, then recruitment may be adjusted. Or, if graduates are having difficulty getting and keeping jobs, then the placement phase may be adjusted. In almost all of the adjustment situations, the action would not be necessary if the other phases were in order. These actions usually result in educators having to work harder rather than smarter! The results of good remediation and enrichment activities will be "smarter" managed programs.

Most instructors have a concept of an "ideal student." Once in a while instructors are lucky enough to find such a student. But for the most part, instructors are faced with managing learning for many students whom they find difficult to understand. Most students admitted to occupational programs have the basic abilities which under the right conditions will lead to success. But for one reason or another, some students do not succeed. Therefore, certain students will need special attention in the form of remediation or enrichment during the learning/teaching phase to successfully complete the program.

According to the dictionary, remediation means "to remedy or correct." Enrichment means "to add to or expand the quality or quantity." Teachers can do both. But in order to be able to remediate or enrich the educational experiences of students, teachers must be able to accept and work from where students are **now.**

Remediating and enriching performance learning, like motivating performance learning, requires teachers to individualize instruction. But remediation and enrichment must go a step further. To truly individualize instruction the teacher must use some diagnostic and perscriptive techniques in the day-to-day management of performance learning.

Lest reality be overlooked, be advised that the variables of **time** for both the teacher and the student, quantity and quality of **learning experiences**, innate **learning ability**, and **environmental stress** created because of economic or family reasons may overshadow good remediation and enrichment (R&E). If this be the case, "failure" will result and total rehabilitation will be required. Hum! Speaking of rehabilitation, the notion of remediation and enrichment could be likened to detective work.

Clientele Sleuth

To paraphrase a Lincolnian statement: All the students will need remediation or enrichment some of the time. Some students will need remediation or enrichment all of the time. But, all students won't need remediation or enrichment all the time. The first case is to determine the proportion of students at any given time who require remediation or enrichment. Although no formal research can be identified, it seems that about ten percent of the students need remediation and about ten percent of the students need enrichment at any given time. Thus, eighty percent of the students can be addressed through traditional means while about twenty percent of the students will need individualized approaches. Case one was easy. Not quite so easy will be case two!

The second case requires us to determine just who is in need of remediation or enrichment. Again, without formal research, we believe four characteristics will provide clues about who needs the additional attention. The characteristics include: (a) interest, (b) self concept, (c) basic skills, and (d) problem-solving skills.

Interest

A "professorish" definition of interest is the degree to which students form personal and meaningful relationships with the process of learning and the content of the curriculum. The definition permits a low level or a high level of interest. Generally speaking, a high level of interest is most desirable. Interestingly, the level of interest is not necessarily related to ability. For instance, a dull student may have a high or low level of interest and a bright student may have a low or high level of interest. Regardless of ability, the low level of interest needs to be addressed. For the "eighty percent," the best ideas are presented in the monograph in this series related to motivating the student. For the other "twenty percent," additional help must be provided through remediation or enrichment.

Low-level interest requiring remediation may be identified from any number of clues. Example clues include: (a) student is quiet, (b) student withdraws from the group, (c) student is often absent or tardy, (d) student does not volunteer, (e) student is disruptive, (f) student questions worth of activities, (g) student puts down the program, (h) student just goes through the motions, and (i) student does poorly on assigned work. Low-level interest requiring enrichment may be identified from any number of clues. Example clues include: (a) student is quiet, (b) student withdraws from the group, (c) student is often absent or tardy, (d) student does not volunteer, (e) student is disruptive, (f) student questions worth of activities, (g) student puts down the program, (h) student just goes through the motions, and (i) student can do the work when pushed.

The clues which indicate interest are many and varied. Any or all or none of the examples may be present. The key clues are usually related to the words **frustration** and **boredom.** It behooves the instructor to determine who has low interest and then design appropriate remediation or enrichment activities.

Self Concept

This is a characteristic which indicates the quantity and quality of feelings students have about themselves. The definition permits a low or a high self concept. Generally speaking, a high self concept is most desirable. Interestingly, the self concept is not necessarily related to ability. For instance, a dull student may have a low or high self concept and a bright student may have a low or high self concept. Regardless of ability, the low self concept must be addressed. It can usually be addressed through remediation or enrichment.

A low self concept requiring remediation may be identified from any number of clues. Example clues include: (a) student has poor eye contact, (b) student expresses doubt about being able to do work, (c) student does not seem to accept compliments, (d) student seems to be preoccupied, (e) student describes self in derogatory terms, (f) student seems to need much reassurance, and (g) student doesn't care about quantity or quality of work. Low self concept requiring enrichment may be identified from any number of clues. Example clues include: (a) student has poor eye contact, (b) student expresses doubt about being able to do work, (c) student does not seem to accept compliments, (d) student seems to be preoccupied, (e) student describes self in derogatory terms, (f) student seems to need much

reassurance, and (g) student seems to have to do everything perfectly all the time.

The clues which indicate self concept are many and varied. Any or all or none of the examples may be present. The key clues are usually related to the words **fait accompli** or perfectionist. The instructor should first determine who has a low self concept and then design appropriate remediation or enrichment activities.

Basic Skills

This characteristic connotes the ability of students to comprehend and communicate through language and mathematic symbols. The attention within the past couple of years given to basic skills is most appropriate. Unfortunately, many occupational educators have viewed the attention as competition for occupational programs. It is not so! Occupational programs need students adept in basic skills as much as transfer programs. The success in certain occupational programs is crucial to at least math or reading or writing skills. Without exception, a highly developed basic skill is most desirable. Interestingly, each basic skill is related to the other; but one can be developed more than the other. Further, the dullness or brightness of a student is most often determined by instruments using basic skills as the vehicle. Remediation and enrichment activities can use the basic skill vehicle to assist the student.

An occupational instructor may be alerted to a poorly developed basic skill by any number of clues. Examples of clues indicating poor reading skills include: (a) student reads only when required, (b) student moves lips when reading, (c) student uses finger to keep place, (d) student avoids technical manuals, (e) student has either writing or math problems. Examples of clues of poorly developed math skills include: (a) student has difficulty with the process for simple computations, (b) student cannot mentally solve simple computation, (c) student does not catch teacher-made errors on chalk board, (d) student pace is slowed whenever work requires a math solution, (e) student has a tendency to guess, and (f) student has a reading problem. Examples of clues of poor writing skills include: (a) student has a limited vocabulary, (b) student does not ask questions, (c) student avoids written assignments, (d) student-written assignments contain many grammar errors, (e) student avoids note taking and making and (f) student has a reading problem.

The clues which indicate an undeveloped basic skill are many and varied. Any or all or none of the examples may be present. Tests are

available to assess these skills more accurately and will be addressed later. In addition, many colleges have professionally prepared personnel who can work with students having difficulty. Nevertheless, the occupational instructor will probably have to identify and encouragingly refer the student. Please note that this section has somewhat inferred that a lack of a basic skill is a function of development and not indicative of the degree of intelligence. Based on these observations, the key clue will probably relate to identifying the student preoccupied with "doing" rather than a blend of "why and doing."

Problem-Solving Skills

This characteristic is reflected by the degree to which students can securely direct their own learning. The lack of this characteristic in a student engaged in CBE is most critical. The presence of this characteristic in an employee is marvelous! Thus, well developed problem-solving skills are most desirable. Interestingly, this skill may be present regardless of the presence of the forenoted characteristics. However, it usually goes hand-in-hand with high interest, good self concept, and well-developed basic skills. But in any event, remediation and enrichment activities will likely be enhanced through problem-oriented activities.

An occupational instructor may be alerted to poor problem-solving skills by any number of clues. Example clues include: (a) student needs frequent directions, (b) student requires explicit directions, (c) student frequently cites "misunderstanding" excuses, (d) student provides assignments late and/or incomplete, (e) student is passive in groups, and (f) student seeks to shift responsibilities.

The clues which indicate an undeveloped problem-solving skill are many and varied. Any or all or none of the examples may be present. Nevertheless, the critical importance of this skill mandates that occupational educators address it. The success in school and on the job is often tied to this skill. Most remediation and enrichment activities should incorporate the essence of problem solving. The key clues will probably relate to the words **independence, responsibility, initiative,** and **common sense.**

The second case is solved when you know the suspects. Although a suspect may be identified from one characteristic such as "interest," the suspect is not "guilty" or may not need "rehabilitation" through remediation or enrichment unless the student falls within the aforenoted "twenty percent." The next section of this monograph addresses the notion of piecing the clues together.

Chain of Evidence

No doubt you have already reasoned that that Lincolnian paraphrase is the most absolute piece of information provided in this monograph. Well, that's the way it is in a good circumstantial evidence case. And, folks, circumstantial is exactly what most occupational educators are faced with in the remediation and enrichment situations. The last bit of soul baring coupled with the Lincolnian paraphrase gives us two pieces of truth. Enough? Probably, but we just can't resist seeing if you can believe the reconstruction of a couple of crimes.

Alleged Crime One

Using past experiences as the standard, formulate a scale to label students as low, medium, or high for (a) interest, (b) self concept, (c) basic skills, and (d) problem-solving skills. Considering all the clues noted earlier in the clientele sleuth for each characteristic, you judge that the student has high interest, high self concept, high general education skills, and high independence. This is done by deduction. You have the clues for low, so you reason that if clues for low are not present, then the student must portray the opposite; and, therefore, the student is high. What's the final verdict? Well, we'd say no crime if the student has opportunity for enrichment and a big crime if no enrichment is available. Your program will be the big loser.

Alleged Crime Two

Using procedures outlined in crime one, you judge the student has low interest, low self concept, low general education skills, and low problem-solving skills. What's the verdict? Hmm, the crime could be on the instructor. If you're a real do-gooder, you might work with the student for total rehabilitation, which will probably make all the other students losers. Thus, being realistic we would probably "cool-out" the student. "Cool-out" in this case is to counsel or have the student counseled into another area. In the final analysis, even occupational education in the community college isn't for everybody.

Alleged Crime Three

Using procedures outlined in crime one, you judge the student has medium interest, medium self concept, medium general education skills, and medium problem-solving skills. You're able to do this also by deduction. If the clues don't indicate low or high, then the clues must be medium. This is an example of the convenience of definition.

It's a lot like the law! What's the verdict? Chances are this is a student who is doing great, considering all variables. No crime! This student can probably remain in the "eighty percent group" most of the time.

Alleged Crime Four

Using procedures outlined in crime one, you judge the student has medium interest, medium self concept, low basic skills, and low problem-solving skills. The verdict? Hung jury! It looks like another trial, with more evidence required. Convenient? Yes. Realistic? Also yes.

Other Alleged Crimes

Hopefully a general procedure is now available to test whether or not a crime has been committed. Try it with your classes. Keep in mind all the various analogies available from Perry Mason including expert testimony. However, the best approach will probably be one of prevention. An alert occupational instructor can probably prevent most of the crimes against students, occupational programs, and occupational teachers. The prevention is usually an appropriate remediation or enrichment activity for about twenty percent of the students at any given time. It is probably best to err toward too many remediation and enrichment activities rather than too few.

Expert Testimony

The informal clues and collective subjective judgments may not always be enough. Sometimes we need expert testimony. It can be in the form of opinion or can be based upon an accepted precedent. In any event, we seek to have something affirmed. The expert testimony should accurately diagnose the problem. While there are literally hundreds of expert testimony devices available, certain ones have been found to be especially useful in occupational education.

Learning Style Inventory

Albert Canfield and J. Clayton Lafferty developed in 1973 an instrument to diagnose learning styles. The test takes about thirty minutes to administer and can be interpreted in about twenty minutes. It may be given to a group or to an individual. There are no right or wrong answers, and it is therefore non-threatening. It seeks to assess the learner's preference for (a) learning conditions, (b) learning content, (c) learning mode, and (d) learning expectation. Molded into the assessment are indicators of learner preference for affilia-

tion, structure, achievement, eminence, numeric forms, quantitative forms, inanimate forms, people, listening, reading, visuals, and "hands on" experiences. It is an excellent device to identify R&E clientele.

The inventory has been field tested, and norms are available including norms for community college occupational students. This inventory may be purchased from Experimental Learning Methods, 38819 Plymouth Road, Plymouth, Michigan 48170.

Cloze Procedure

The Cloze procedure is used to measure both reading levels and comprehension. The procedure has evolved over a period spanning two decades. An exact credit of source could not be identified. However, considerable research has been done related to the technique. The Wallace and Larsen book listed in the Annotated Outreach section of this monograph provides an excellent review of the topic.

The Cloze procedure is helpful in identifying whether a text book or reference can be handled by a class or student. It may be administered and scored in just a few minutes. It is an excellent device to create student awareness of reading level and comprehension.

To use the Cloze procedure, the teacher leaves the first sentence alone and deletes every 5th remaining word from a 275-word segment of a text. The deleted word is replaced with a blank. Each blank is of the same length. The student must fill in the blank with a word that he/she thinks the author used.

To score the test, you count the number of replacements correctly made. Misspellings are usually counted as correct, whereas alternative word forms or tenses are counted as errors. The reader's performance is expressed as a percentage score (i.e., 10 correct out of 50 items = 20%, etc.). For comfortable learning, percentages of 35 and 55 are required.

It has been shown that the lowest figure is the equivalent of the appropriate instructional level, while the upper figure is equivalent to an independent level. This means that for quick estimate purposes, one can give a reader a Cloze passage and tell how well he/she might be able to handle the text from which the passage was taken. This in turn will help to validate the students who will likely require remediation and validate those for whom enrichment would be desirable.

To use Cloze for comprehension training, many modifications of the usual process are possible. One need not delete automatically. The word class to be deleted can be restricted. Choices of words

might be provided rather than leaving a blank. The essence is that the mutilated passage must have sufficient information remaining to allow positive identification of the deletion and that there is sufficient information present between blanks to form fairly independent items.

For working on comprehension of lengthy materials, one can put masking tape over specific words for 100-word or longer passages. The notion is that, as a reader comes to a taped word, he/she guesses what the word is, pulls the tape off, gets feedback on the guess, and goes right on.

For developing oral comprehension, an oral reader can stop in the midst of reading and have a listener guess what the next word will be. The reader reinforces or corrects by saying the word in the book and goes on until stopping again.

Smog Grading

Some basic skill problems can be prevented by simply not using inappropriate material. A quick and simple procedure has been developed called the SMOG. Again, this is an evolved technique and specific credit cannot be given. The technique seeks to establish the reading level needed by the learner to understand the material. This technique reduces the variables of sentence length and three or more syllable words to reading level.

The procedure is surprisingly simple and accurate. You need to (a) select thirty sentences from the material with a third coming from different sections, (b) count the number of words with three or more syllables, (c) estimate the square root of this number and add three. The figure is reading level a learner must have to understand the material. More specifically, the thirty sentences might contain 144 three or more syllable words. Thus, the reading level needed to understand the material would be 15. It would be doubtful that this example material would be appropriate for most occupational students.

Math Tests

Although reading comprehension has been emphasized, teachers can develop approaches to diagnose math skills. Basic math computations can be pre-tested by selecting items which reflect what the student needs to know in order to meet performance objectives in the program. If pre-tests are thought of as diagnostic exercises, both the teacher and student will be able to evaluate the results with little anxiety.

Based on the student's performance exercise, perscriptive activities can be determined. The student might be referred to the learning resource center of the schools, a module, or a programmed text.

Communication Tests

This one is really easy. All the occupational instructor needs to do is to listen to the student or require a paragraph of writing. The interesting thing about communication tests is that some instructors let this ride until the middle of the term. It could be determined even before the first class.

Professional Opinion

The aforementioned expert testimony can be used by the instructor on a day-to-day basis. In most situations, professionals can and should be called upon to further diagnose problems. In turn, a whole host of other tests and devices can be used to diagnose remediation and enrichment needs. A good rule of thumb is to seek additional advice if you are in doubt after following up the clues and informal tests identified in this monograph.

Corrective Action

Any "conviction" requires some corrective action. It may range from a simple awareness acknowledgment to total rehabilitation. Remediation or enrichment will correct most everything. It should not be punitive but rehabilitative. Thus, capital punishment is out! Below are brief "sentences" which an instructor might impose. Often the "sentence" is on the instructor. In any event, the results should be positive. The list is intended only to stimulate creativity.

1. Use instructional modules as follow-up.
2. Encourage certain students to develop instructional modules as enrichment exercises.
3. Facilitate optional learning experiences.
4. Facilitate peer tutoring.
5. Switch student team compositions.
6. Explain diagnostic techniques to students.
7. Develop a reward system to encourage problem-solving and basic skill development.
8. Appeal through all five senses when teaching.
9. Seek student opinions for alternative learning approaches.
10. Make attendance optional.

Kaufman, Roger. **Identifying and Solving Problems: A Systems Approach.** LaJolla, Calif.: University Associates, Inc., 1976, 121 pages.

This little manual provides a system for dealing with problems: problems associated with teaching, managing, and living. There is a saying: Be sure you are part of the solution, not part of the problem. The author provides some interesting "how to's" in being part of the solution. Systematic activities are outlined to identify the problem and to determine a workable solution. There is a strong focus on evaluating results and replanning.

The graphics are good, and there is a reasonable amount of humor which helps to maintain interest in the subject. Most of all, the manual is written with the reader in mind. There are light examples with which the reader can identify. For example, "So you want to buy a Cadillac?" "You'd better take off 10 lbs." Although the examples are light, they illustrate important steps to effective problem-solving.

Teachers may wish to use it as a personal guide, but it also might be a good handbook for students who are learning how to assume more responsibility for managing their own learning.

Moore, William. **Community College Response to the High-Risk Student: A Critical Reappraisal.** Washington D.C.: Horizons Issues Monograph Series. American Association of Community and Junior Colleges. 1976. 43 pages.

The monograph provides a different perspective on the idea of remediation. High-risk is the term used to describe the students who are expected to need particular and specialized attention if they are to succeed.

The humanistics or personality considerations are emphasized. An overview of the characteristics of and responses necessary to the high-risk student's success is provided. A neat summary of why high-risk students avoid seeking help from the teacher is presented on page 38.

Wallace, Gerald and Larsen, S. **Educational Assessment of Learning Problems: Testing for Teaching.** Boston: Allyn Bacon, Inc. 1978. 499 pages.

This book is designed to present teachers with the appropriate assessment strategies from preschool to adolescence. However, the techniques are equally helpful to community college instructors.

The book provides up-to-date, concise information in all areas of assessment. The informal tests described are most helpful on a day-to-day basis. The formal test descriptions should be beneficial in discussing referrals with the experts. Finally, there is a super chapter related to career education assessment.

Sign Off

In most community colleges the teacher need not approach the problem of remediation or enrichment alone. There are other resources available. For adequate referral there must first be agreement between the instructor and the student that additional resources are needed to make the learning personally meaningful to the student.

Remediation or enrichment cannot be accomplished if it is isolated from the student's primary goal. Since relevance is the key to making learning meaningful for individual students, the teacher must constantly monitor what goes on in learning experiences designed to support the primary occupational goal of the student. By taking the initiative and identifying what students need to succeed, the occupational teacher becomes an advocate for the student. The occupational teacher may need to describe the problem, provide content information, and incorporate resources.

In summary, every student has the potential need for remediation or enrichment. Crime does not pay and prevention may insure your job.

ERIC Clearinghouse for Junior Colleges
96 Powell Library Building
University of California
Los Angeles, California 90024

JAN 16 1980